GENERAL

Power supply:	AC 120 V, 50 – 60 Hz
Power consumption:	210 W

Operating ambient temperature: 41°F to 104°F (5°C to 40°C)
Operating ambient humidity: 10% to 90% (no condensation)
Weight: 36.96 lbs (16.8 kg)
Dimensions (W × H × D): 16-3/4 × 6-15/16 × 16-3/8 inches
Recording format: DVCPRO format
Recording tracks: Digital video
Time code; Recorded in sub-code area
Digital audio; 2 channels
Cue Signal; 1 track
Control (CTL); 1 track
Tape speed: 33.820 mm/sec
Recording time: 184 minutes (with AJ-5P92LP)
66 minutes (with AJ-P66MP)
Tape: 1/4-inch thin magnetic layer metal tape
FF/REW time: Less than 3 minutes (with AJ-5P92LP)
Less than 2 minutes (with AJ-P66MP)
Editing accuracy: ±0 frame (using time code)
Tape timer accuracy: ±1 frame (using continuous CTL signal)
Servo lock time: Less than 0.5 sec.
(color framing/ standby ON)

VIDEO

(Digital video)

Sampling frequencies: Y; 13.5 MHz/P_B, P_R; 3.375 MHz
Quantizing: 8 bits
Error correction: Reed-Solomon product code

(Digital IN/analog component OUT)

Video bandwidth: Y; 30 Hz to 5.5 MHz (±0.5 dB)
5.75 MHz (–2 dB)
P_B, P_R; 30 Hz to 1.3 MHz (±1 dB)
1.5 MHz (–5 dB) typ.
S/N ratio: Better than 60 dB
K factor: Less than 1%

(Analog component IN/component OUT)

Video bandwidth: Y; 30 Hz to 5.5 MHz (±1 dB)
5.75 MHz (–3 dB)
P_B, P_R; 30 Hz to 1.3 MHz (±1 dB)
1.5 MHz (–6 dB) typ.
S/N ratio: Better than 55 dB
K factor: Less than 1%

(Analog composite IN/composite OUT)

Video bandwidth: Y; 30 Hz to 4.5 MHz (±1 dB)
DG: Less than 4%
DP: Less than 3°
Y/C delay: Better than 20 nsec
K factor: Less than 2%

(Video input connector)

Analog component input: BNC×3 (Y, P_B, P_R)
Y; 1.0 Vp-p, 75Ω
P_B, P_R; 0.486/0.7 Vp-p switchable, 75Ω
(75% color bar, 7.5% setup)
Analog composite input: BNC×2, loop-through, 75Ω on/off
Reference input: Analog composite
BNC×2, loop-through, 75Ω on/off
Serial digital component input (option): Complies with SMPTE 259M-C standard, BNC×2, active through

(Video output connector)

Analog component output: BNC×3 (Y, P_B, P_R)
Y; 1.0 Vp-p, 75Ω
P_B, P_R; 0.486/0.7 Vp-p switchable, 75Ω
(75% color bar, 7.5% setup)
Analog composite output: BNC×3
Video1/video2/video3 (superimpose on/off)
Serial digital component output (option): Complies with SMPTE 259M-C standard, BNC×3

(Video signals adjustment)

Composite video input signal: ±3 dB
Video output gain: ±3 dB
Video output chroma gain: ±3 dB
Video output hue: ±30°
Video output setup: ±15 IRE
Video output sync phase: ±15 µsec
Video output SC phase: ±180°
Video output Y/C delay: ±300 nsec

AUDIO

(Digital audio)

Sampling frequencies: 48 kHz
Quantizing: 16 bits
Frequency response: 20 Hz to 20 kHz ±1 dB
Dynamic range: Better than 90 dB (1 kHz, emphasis OFF, "A" weighted)
Distortion: Less than 0.05% (1 kHz, emphasis OFF, standard level)
Crosstalk: Less than –80 dB (1 kHz, between 2 channels)
Wow & flutter: Below measurable limit
Headroom: 20 dB
Emphasis: T1=50 µsec/T2=15 µsec (on/off selectable)

(Cue track)

Frequency response: 300 Hz to 6 kHz ±3 dB

(Audio input connector)

Analog input (CH1/CH2): XLR×2, 600Ω/high impedance selectable, +4/0/–20 dBu
Digital input (CH1/CH2): XLR×1, AES/EBU format
Serial digital input (option): Complies with SMPTE 259M-C, 272M standard (BNC, 75Ω)
Cue track input: XLR×1, 600Ω/high impedance selectable, +4/0/–20/–60 dBu

(Audio output connector)

Analog output (CH1/CH2): XLR×2, low impedance, +4/0/–20 dBu
Digital output (CH1/CH2): XLR×1, AES/EBU format
Serial digital output (option): Complies with SMPTE 259M-C, 272M standard (BNC, 75Ω)
Cue track output: XLR×1, low impedance, +4/0/–20 dBu
Monitor output: XLR×2, low impedance, +4/0/–20 dBu
Headphones: Variable level, mini-jack, 8Ω

Other input/output connector

Time code input: XLR×1, 0.5 to 8 Vp-p
Time code output: XLR×1, 2.0 Vp-p
RS-422A input/output: D-sub 9-pin, RS-422A interface
RS-422A output: D-sub 9-pin, RS-422A interface
RS-232C: D-sub 25-pin, RS-232C interface
Parallel input/output: D-sub 25-pin
Encoder remote: D-sub 15-pin

Weight and dimensions shown are approximately.
Specifications are subject to change without notice.

IMPORTANT
"Unauthorized recording of copyrighted television programs, video tapes and other materials may infringe the right of copyright owners and be contrary to copyright laws."

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION:
To reduce the risk of fire or shock hazard and annoying interference, use the recommended accessories only.

WARNING:
To reduce the risk of fire or shock hazard, do not expose this equipment to rain or moisture.

CAUTION:
TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, REFER MOUNTING OF THE OPTIONAL INTERFACE BOARD TO AUTHORIZED SERVICE PERSONNEL.

FCC Note:
This device complies with Part 15 of the FCC Rules. To assure continued compliance follow the attached installation instructions and do not make any unauthorized modifications.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

☐ is the safety information.

- Do not insert fingers or any objects into the video casette holder.
- Avoid operating or leaving the unit near strong magnetic fields. Be especially careful of large audio speakers.
- Avoid operating or storing the unit in an excessively hot, cold, or damp environment as this may result in damage both to the recorder and to the tape.
- Do not spray any cleaner or wax directly on the unit.
- If the unit is not going to be used for a length of time, protect it from dirt and dust.
- Do not leave a cassette in the recorder when not in use.
- Do not block the ventilation slots of the unit.
- Use this unit horizontally and do not place anything on the top panel.
- Cassette tape can be used only for one-side, one direction recording. Two-way or two-track recordings cannot be made.
- Cassette tape can be used for either Color or Black & White recording.
- Do not attempt to disassemble the recorder. There are no user serviceable parts inside.
- If any liquid spills inside the recorder, have the recorder examined for possible damage.
- Refer any needed servicing to authorized service personnel.

GENERAL

Power supply:	AC 220 – 240 V, 50 – 60 Hz
Power consumption:	210 W

Operating ambient temperature: 5°C to 40°C (41°F to 104°F)
Operating ambient humidity: 10% to 90% (no condensation)
Weight: 16.8 kg
Dimensions (W × H × D): 424 × 175 × 415 mm
Recording format: DVCPRO format
Recording tracks: Digital video
Time code; Recorded in sub-code area
Digital audio; 2 channels
Cue signal; 1 track
Control (CTL); 1 track
Tape speed: 33.854 mm/sec
Tape: 1/4-inch thin magnetic layer metal tape
Editing accuracy: ±0 frame (using time code)
Tape timer accuracy: ±1 frame (using continuous CTL signal)
Servo lock time: Less than 0.5 sec. (colour framing/standby ON)

VIDEO

(Digital video)

Sampling frequencies: Y; 13.5 MHz/P_B, P_R; 3.375 MHz
Quantizing: 8 bits
Error correction: Reed-Solomon product code

(Digital IN/analogue component OUT)

Video bandwidth: Y; 25 Hz to 5.5 MHz (±0.5 dB)
5.75 MHz (–2 dB)
P_B, P_R; 25 Hz to 1.3 MHz (±1 dB)
1.5 MHz (–5 dB) typ.
S/N ratio: Better than 60 dB
K factor: Less than 1%

(Analogue component IN/component OUT)

Video bandwidth: Y; 25 Hz to 5.5 MHz (±1 dB)
5.75 MHz (–3 dB)
P_B, P_R; 25 Hz to 1.3 MHz (±1 dB)
1.5 MHz (–6 dB) typ.
S/N ratio: Better than 55 dB
K factor: Less than 1%

(Analogue composite IN/composite OUT)

Video bandwidth: Y; 25 Hz to 5.5 MHz (±1 dB) typ.
DG: Less than 4%
DP: Less than 3°
Y/C delay: Better than 20 nsec
K factor: Less than 2.5%

(Video input connector)

Analogue component input: BNC×3 (Y, P_B, P_R)
Y; 1.0 Vp-p, 75Ω
P_B, P_R; 0.7 Vp-p, 75Ω
(100% colour bar)
Analogue composite input: BNC×2, loop-through, 75Ω on/off
Reference input: Analogue composite
BNC×2, loop-through, 75Ω on/off
Serial digital component input (option): Complies with EBU Tech. 3267-E standard, BNC×2, active through

(Video output connector)

Analogue component output: BNC×3 (Y, P_B, P_R)
Y; 1.0 Vp-p, 75Ω
P_B, P_R; 0.7 Vp-p, 75Ω
(100% colour bar)
Analogue composite output: BNC×3
Video1/video2/video3 (superimpose on/off)
Serial digital component output (option): Complies with EBU Tech. 3267-E standard, BNC×3

(Video signals adjustment)

Composite video input signal: ±3 dB
Video output gain: ±3 dB
Video output chroma gain: ±3 dB
Video output chroma phase: ±30°
Video output black level: ±100 mV
Video output sync phase: ±15 µsec
Video output SC phase: ±180°
Video output Y/C delay: ±300 nsec

AUDIO

(Digital audio)

Sampling frequencies: 48 kHz
Quantizing: 16 bits
Frequency response: 20 Hz to 20 kHz ±1 dB
Dynamic range: Better than 90 dB (1 kHz, emphasis OFF, "A" weighted)
Distortion: Less than 0.05% (1 kHz, emphasis OFF, standard level)
Crosstalk: Less than –80 dB (1 kHz, between 2 channels)
Wow & flutter: Below measurable limit
Headroom: 18 dB
Emphasis: T1=50 µsec/T2=15 µsec (on/off selectable)

(Cue track)

Frequency response: 300 Hz to 6 kHz ±3 dB

(Audio input connector)

Analogue input (CH1/CH2): XLR×2, 600Ω/high impedance selectable, +4/0/–20 dBu
Digital input (CH1/CH2): XLR×1, AES/EBU format
Serial digital input (option): Complies with EBU Tech. 3267-E standard (BNC, 75Ω)
Cue track input: XLR×1, 600Ω/high impedance selectable, +4/0/–20/–60 dBu

(Audio output connector)

Analogue output (CH1/CH2): XLR×2, low impedance, +4/0/–20 dBu
Digital output (CH1/CH2): XLR×1, AES/EBU format
Serial digital output (option): Complies with EBU Tech. 3267-E standard (BNC, 75Ω)
Cue track output: XLR×1, low impedance, +4/0/–20 dBu
Monitor output: XLR×2, low impedance, +4/0/–20 dBu
Headphones: Variable level, mini-jack, 8Ω

Other input/output connector

Time code input: XLR×1, 0.5 to 8 Vp-p
Time code output: XLR×1, 2.0 Vp-p
RS-422A input/output: D-sub 9-pin, RS-422A interface
RS-422A output: D-sub 9-pin, RS-422A interface
RS-232C: D-sub 25-pin, RS-232C interface
Parallel input/output: D-sub 25-pin
Encoder remote: D-sub 15-pin

Weight and dimensions shown are approximately.
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ENGLISH

■ **THIS APPARATUS MUST BE EARTHED**

To ensure safe operation the three-pin plug must be inserted only into a standard three-pin power point which is effectively earthed through the normal house-hold wiring.

Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.

The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe. For your safety, if in any doubt about the effective earthing of the power point, consult a qualified electrician.

■ **DO NOT REMOVE PANEL COVER BY UNSCREWING**

To reduce the risk of electric shock, do not remove cover. No user serviceable parts inside. And do not insert fingers or any other objects into the video cassette holder.

CAUTION:

Do not install or place this unit in a bookcase, built in cabinet or in another confined space in order to keep well ventilated condition. Ensure that curtains and any other materials do not obstruct the ventilation condition to prevent risk of electric shock or fire hazard due to overheating.

WARNING:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSOIRES ONLY.

CAUTION:

To reduce the risk of fire or shock hazard, refer change of switch setting inside the unit to qualified service personnel.

Operating precaution

Operation near any appliance which generates strong magnetic fields may give rise to noise in the video and audio singals. If this should be the case, deal with the situation by, for instance, moving the source of the magnetic fields away from the unit before operation.

☐ is the safety information.

Attention/Attentie

- This apparatus contains a lithium battery for memory back-up.
- For the removal of the battery at the moment of the disposal at the end of the service life please consult your dealer.
- Do not throw away the battery. Instead, hand it in as hazardous waste.

- Dit apparaat bevat een lithiumbatterij voor memory back-up.
- Raadpleeg uw leverancier over de verwijdering van de batterij op het moment dat u het apparaat bij einde levensduur afdankt.
- Gooi de batterij niet weg, maar lever hem in als KCA.